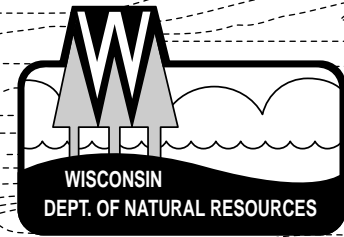


WISCONSIN WOOD

MARKETING BULLETIN



Published by Wisconsin Department of Natural Resources, Madison, WI 53711

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WOOD MARKETING BULLETIN

The Wisconsin DNR publishes the "Wisconsin Wood" marketing bulletin every two months. It serves the timber producing and wood using industries of Wisconsin by listing items: For sale - forest products, equipment and services, wanted - forest products, equipment and services; employment opportunities. There is no charge for the Bulletin or inserting items in it. Only items deemed appropriate to the timber producing and wood processing industries will be listed. Also the Bulletin will feature forest products utilization and marketing news, safety notes, coming events, new literature, tips to the industry, and listing or employment wanted or positions that are available.

If you know of someone who would like to be on the Bulletin mailing list, please ask them to send their name, address and zip code to the return address on the back page. Also, if you have items to list, send in the form or write a letter to the return address on the back page. Repeat listing of items requires a written request each time the item is to be repeated.

Published by Wisconsin Department of Natural Resources, Madison, WI 53711

WATER, WATER, EVERYWHERE

By Gene Wengert

Water is the lifeblood of a tree, so to speak. A living tree can contain, by weight, as much water as wood. The bark is an excellent water barrier and it serves to, among other things, keep the water in the tree. But once you harvest the tree, cut it into logs, and then saw the logs into lumber, the exposed wood quickly begins to lose this water – a process known as drying. It's important to control this drying process so that the final product has the quality characteristics that you and your customers expect and need.

There are many aspects of drying to consider, of course, and other articles in

this Special Section will touch on these. Here, I'll focus upon moisture content – the weight of water in a piece of wood compared to the oven-dry weight of the same piece of wood – and why it's important. In my work as a consultant, I find that 3/4 of the problems I deal with are typically related to moisture content (or "C"). Either the person drying the lumber did not know the moisture-content requirements for the customer, or the drying operation was just sloppy.

Before getting to the specifics of moisture content, though, perhaps we should first step back for a moment, and answer a very basic question: Why should wood be dried?

The foremost answer to that question is that wood shrinks as it loses moisture and swells when it regains moisture. As an approximate rule of thumb, each 4-percent MC change in dry wood will result in a 1/2- to 1-percent size change across the grain (wood seldom shrinks or swells in length). Naturally, the precise amount of shrinkage will vary from species to species, with species such as teak being very stable while dense hardwoods such as oak are more unstable.

Wood is also dried in order to eliminate the risk of fungal infestations – rot, mildew and stain. Under 22-percent MC, there is no risk of these infestations.

Another reason for drying is that wood will glue and machine better at low MCs. For softwoods, ideal MCs for machining and gluing are 9- to 12-percent MC; for hardwoods, 6- to 7-percent MC. Most finishes also work better at low MCs.

Finally, improved fastening is yet another reason for drying. When the MC changes, nails and screws will loosen or lose their holding power, especially if installed in wet lumber that then dries to lower MCs.

Required or recommended MC levels – Depending on the product being dried, and how this product will be used, the required final moisture content at the end of drying will vary. For someone involved in drying, achieving the correct final MC is

critical. Usually, the customer assumes that the product they are buying is at the required level. Customers may not give precise MC levels; rather, they assume that the seller knows and has achieved the correct values. Poor communication about the required final MC frequently leads to dissatisfaction for the customer and, perhaps, even legal action. As a general rule, customers will be satisfied if the MC of the lumber is very close to the MC of the wood in use.

The MC of wood in use depends on the relative humidity (RH) surrounding the product. Temperature is not a factor in determining the MC in use, although MC changes are faster when the wood is warmer. To simplify discussions, the moisture in the air often is termed the EMC (equilibrium moisture content) rather than the RH. The EMC is numerically equal to the MC that wood will eventually achieve when exposed to a given relative humidity.

Some key moisture values to consider are in the table below. Note: "Exterior" means outside climate, but not exposed to direct rain; "interior" means outside climate, but not exposed to direct rain; "interior" means inside an office or home.

The application of the wood is also important. Here are some general applications and the typical MC associated with each: Softwood construction lumber – MC in-use is typically around 10- to 12-percent MC, but can range from more than 30 percent to less than 6 percent. In practice, most lumber will be dried to under 19-percent MC but not much below 12-percent MC.

Lumber for bending – For severe bends, 25-percent MC is ideal. For shallow bends, 15- to 20-percent MC is acceptable.

Lumber for treating – In most cases, the outer shell must be less than 30-percent MC. Often, for construction lumber that will be treated, the entire piece will average about 20 percent MC or slightly lower.

Furniture, cabinets and flooring – because further drying in-use causes many more problems than a slight regain of moisture for these products, the preferred level in most cases is 5.5- to 7-percent MC.

Lumber for barns, fences and other exterior locations – lumber for such uses are typically dried to 16 percent or slightly lower.

Being specific – Finally, let me close with a few definitions. Typically, you'll find that using general terms to describe the moisture content may not be adequate. Whether you're a producer or a manufacturer, you should always be as specific as possible in expressing your MC requirements or needs.

Green moisture content: This is the moisture content of wood in the living tree. The term has been used to refer to lumber that is more than 30-percent MC, but this is an incorrect usage. Green MC levels vary with species, but are typically 75-to 100-percent MC. Douglas fir has 30 percent green MC; white oak, 65 percent MC; red oak, 75 percent MC; southern pine, 100 percent MG; and redwood and cottonwood, over 150 percent MC.

Wet: There are three definitions for this term. Lumber that is over 30 percent MC is often called "wet." Softwood lumber over the specified MC level on a grade stamp is called "wet." Finally, hardwood lumber that is over 8 percent MC is often called "wet," especially if 7 percent MC is the expected maximum LC level.

Air-dried: Lumber that has been air-dried to approximately 20 to 30 percent MC is called air-dried; Partly air-dried: Lumber that has been air dried to approximately 30 to 50 percent MC is referred to as partly air-dried (PAD); Predried: Hardwood lumber dried to less than 25 percent MC (approximately) in a predryer is called predried; Kiln-dried (softwood): Softwood lumber that has been dried in a kiln to under 19 percent MC is called kiln-dried. The expression often includes a MC level, such as KD15, meaning that most of the pieces are under 15 percent MC. Most of the time, the maximum MC level is specified in the grading rules. Minimum MCs are not specified, but could be important to some customers or wood manufacturers; Kiln-dried (hardwood): hardwood lumber that is under 10 percent MC may be called kiln-dried, especially by producers. For most buyers and users of kiln-dried lumber, however, kiln-dried means lumber that is 6 to 8 percent MC, or perhaps 5 to 7 percent MC. There is certainly some confusion about the exact definition. It's best to use the term "kiln-dried" along with a MC range – such as

"kiln –dried to 5 to 7 percent MC." It's generally expected that there may be a few (but very few) pieces over 7 percent MC and under 5 percent MC; Final MC: The moisture content when the lumber leaves a kiln or other drying system is called the final MC.

Contributing editor Gene Wenger is president of the *Wood Doctor's Rx* in Madison, Wisconsin.

Source: *Sawmill & Woodlot*, May/June 2003.

RESEARCHERS HOPE TO TAP SILVER MAPLE SAP POTENTIAL

James J. Zaczek is feeling pretty sap happy these days.

A forest ecologist from Southern Illinois University Carbondale (SIUC), Zaczek has been trying to find out whether silver maple trees could compete with sugar maples in producing syrup – and extra income – for the region's farmers.

"After two years of data collection, it's obvious that we have some clear winners," he says.

Experts have mostly poooh-pooed the silver maple as a syrup source because, they say, it doesn't have enough sugar in its sap. But, says Zaczek, tests at SIUC show sap from these trees contain at least 1.5 percent sugar and often as much as 2 percent, which is the standard concentration in sugar maple sap.

With support from the Illinois Department of Agriculture, Zaczek and fellow researchers Andrew D. Carver, John E. Preece, Jean C. Mangun and Karl W. J. Williard have spent two years studying the silver maple, a fast-growing, bottomland species.

They're focusing mainly on silver maples used in previous SIUC research aimed at turning out fast-growing trees. Grown from cuttings, each tree variety in this study has exactly the same genes as all others of its kind. This helps the researchers pinpoint how differences in where each kind is planted and what happens to it there affect the amount of sap it produces.

"The winners tend to be winners whether they are planted in wet sites or dry ones, though they sometimes change in their ranking (when comparing trees at dry sites with trees at wet ones)," says Michelle L. Crum, a forestry graduate student from Brocton assigned to the project.

Zaczek has measured hundreds of trees. Because some of them came from stock from other states and Canada, he decided to tap local silver maples as well so as to get a clearer fix on area conditions. These

results varied more than those from the research trees, but his team did find high volume, sweet-sap trees among the home-grown varieties.

"They were pretty consistent, too, in being good for bad trees," Cum says. "And the good thing about silver maples is that they thrive in a riparian (or stream side) zone. That's a side benefit. They're a good tree to control agricultural runoff. This would mean that a farmer who planted them as a buffer zone could also get added income from them."

A gallon of syrup now sells for \$38, Zaczek says. While a tree may produce only half a gallon of syrup in a season *it takes 43 gallons of sap containing 2 percent sugar to make a gallon of syrup), that's still \$19 per tree, he notes.

The study has one more year to run. When it's over, Zaczek says he'll be able to say which varieties would grow the fastest while making a lot of pretty sweet sap.

"Unfortunately, these (research) trees are not commercially available just yet, but we're hoping someone might have an interest in that aspect," Zaczek says. "Often, if there's a need and a niche, someone will step in."

Source: *The Northern Logger & Timber Processor*, May 2003.

VALUES THAT MAKE A SUCCESSFUL WOODWORKING COMPANY

By Tom Dossenbach

During the last few years, we have seen evidence of an alarming trend that suggests the lowering of corporate values and even an erosion of ethics in industry. This month's column attempts to stimulate a review of ethical considerations within this country's wood-working industry by looking at values that make a successful company in this climate of rapid globalization.

I can remember back almost 40 years in our industry when all it took was the word of two people to make a contract that was honored by both. While that may still be the case between close associates in the industry, it is the exception rather than the rule today. Ethical issues are only one of the considerations in evaluating our company values or those of our suppliers. With the rapid globalization that has occurred in our industry, it is very likely that companies will be challenged by those who do not hold to our traditional business values. Woodworkers are vulnerable to severe financial setbacks if they do not quickly and accurately identify and assess

the values of a potential supplier of partner.

Essential Values – The following are eight essential and traditional values that (while self-evident to many of us) must be present within the core structure of manufacturers and suppliers to form a lasting and mutually profitable association.

The Customer Comes First – Of course you would expect me to list this one first. We often say that we are in the business to make money. This is true. No company can survive without making a profit. However, there is a component that must precede profit. That is customer satisfaction. Without it, a company will not maintain a mutually beneficial relationship with their customers.

This is evidenced by examples from the past few years during the rush to import products from overseas. While it is not a universal problem, most efforts to import finished products have resulted in at least short-term problems for the majority of first-time buyers and importers. Let me explain why.

Many small companies overseas recognize that making money is essential for their success. After all that is why they have gone into the woodworking export business – to make money. The difficulty lies in the unfortunate fact that there are often no values to sustain their efforts.

Often a container of product is shipped after many months of careful negotiations and discussions of specifications only to arrive with major problems destined to render the products unusable to consumers. The exporting company has received their payment for the merchandise and looks at this situation as your problem, and looks for you to resolve it internally. May be you did purchase the products at 40 percent of your costs, but now you have unusable products on hand that must be reworked or scrapped.

If your overseas supplier had customer satisfaction as a core value of the company, this would likely not have happened in the first place and certainly would have been promptly corrected without hesitation.

Maximum Quality Effort – In order to satisfy any customer, a company must continually focus on maximum quality effort. It doesn't matter what final product is being manufactured, the quality effort has to be maximized every day until the company regularly ships products with zero defects.

Would you buy sandpaper from a supplier that had splice failure in 5 percent of its sanding belts? Of course you wouldn't. Nor do you want to ship

products to your customers that are not of acceptable quality. Likewise, you must make sure that all of your suppliers share your company value of MQE. If you do not, you will lose customers as surely as you will sharply reduce or eliminate your profit margins.

Continuous Improvement – If any woodworking company is to remain competitive, it must abide in a state of continuous improvement. I have written a lot about this and it should come as no surprise that this must be a key component in the core values of a company. If you believe in continuous improvement and all of your suppliers share the same commitment, you have the formula for a powerful, long-term competitive punch. Only those who continually innovate and adjust will survive.

Thus, you must ascertain the level of commitment of your suppliers to change to suit your requirements and those of the marketplace. To do as you did yesterday is a formula for destruction, and the same goes for your suppliers. Successful companies agree to have continuous improvement as part of their company core values.

"It is important to remember that no matter what the values of others; our values must set the standard of how we conduct our business."

Maximizing Productivity – World-class companies make maximum productivity an integral part of their core values. There is no room for waste of men, materials, money or information. Much has been written about lean manufacturing – an effort to rid our woodworking enterprises of all waste.

The world is demanding shorter lead times of products with higher value than those of yesterday. Achieving maximum productivity must be in the minds of every manager and employee of every company and supplier in order to provide the best value to the customer.

Teamwork – A successful company must believe in the value of each employee. Not only is this essential, but it has to be such a part of the core values of the company that every effort is made to empower each and every employee to contribute in the realization of the goals of the company and the execution of its values.

Too many woodworking companies are still treating their employees as if they are mere machine operators, fork lift drivers or lacquer sprayers. Every necessary job is honorable in itself because without it the product or service could not be completed.

Most will admit this much but there is more.

An employee is a storehouse of knowledge trained through the exercise of his or her job and the observation of the surrounding environment that includes the actions of others. Believe it or not, they have a better perspective than many supervisors of what is effective in implementing the values mentioned above.

Teamwork means that these employees are empowered to share these observations and use their creativity to make the company more successful. If given the chance, they will develop incredible solutions to difficult challenges.

Honesty – I read once that being honest was simply being consistent with reality. Therefore, to be dishonest is to be in conflict with reality and this will surely be self-defeating. Reality is truth and vice versa. We expect others to be honest with us and we therefore must be honest with them. There should be no exceptions – none.

Unfortunately, there are some companies and some in top management that do not accept reality or truth as an important ingredient of success. The only reality to them is that they must do anything to make money and this means doing anything to their business partners to get the upper hand. Surely no reader of this column would subscribe to this philosophy, but he forewarned as you begin to look to form relationships abroad.

"Integrity is the conviction to adhere to the values we have set in our woodworking companies."

Justice – What is justice? The best one-word definition is fairness (another word that seems to carry less meaning as we get into the 21st century). Again, this is an essential part of the values of a successful company. It is imperative that we demonstrate fairness in dealing with colleagues, suppliers, and customers. There is always the fair or just thing to do in every circumstance. For my part, I want to deal with companies who recognize this and do it.

Integrity – Integrity is the conviction to adhere to the values we have set in our woodworking companies. To do less is an abomination of all we stand for. If you have integrity, you (by my definition) have all of the above. It is a joy as well as highly profitable to conduct business with companies consisting of men and women of integrity.

It is important to remember that no matter what the values of others; our values must set the standard of how we conduct our business. Give your company a value

check and see how you stack up. If (and only if) your house is in order can you demand the same of others.

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Source: *Wood & Wood Products*, May 2003.

WAUSAU-MOSINEE PAPER ACQUIRES ASSETS OF LAMINATED PAPERS

Wausau-Mosinee Paper Corp. said that it has acquired the production assets and customer base of Laminated Papers, Inc., a producer of high-quality packaging materials for the paper industry. The assets will become part of Mosinee Converted Products, a division of the company's Printing and Writing Group. Terms of the deal were not disclosed.

Based in Holyoke, Mass., Laminated Papers has produced innovative roll-wrap products since 1953 and pioneered the blending of wax laminates to replace asphalt-laminated papers, the previous industry standard.

Wausau-Mosinee said Laminated Paper's production will be transitioned to Mosinee Converted Product's facilities in Wisconsin and Mississippi, allowing for increased equipment utilization and improved cost efficiencies.

Source: *PaperAge*, April/May 2003

"PAINLESS KNIFE" CUTS INTO FUTURE HARDWOOD INDUSTRY PROFITS

Production Expected to Lag Further as Downturn Drags On – Adapted from "How Hardwood Markets Are Changing," a talk Dr. William G. Luppold of the U.S. Forest Service. Dr. Luppold spoke at HMA's recent Southeast Regional Meeting in Rocky Mount, N.C.

It's difficult to generalize about hardwood markets today. There are 160 people in this room and they basically face 160 different market situations. One thing we can say for sure, however, is that stumpage prices have increased. Another thing sneaking up on us is a rapid change in the forest resource. Industry must contend with these changes while having to deal with the hardwood market cycle.

The decline in hardwood lumber demand is difficult to predict because the extent of

the decline depends on factors inside and outside the industry. In a normal cycle, demand declines as secondary processors reduce production and then start to use their lumber inventories. This double whammy is what causes demand and price to drop quickly, even when the economy is not in a recession. In serious cycles like the one we have now, the decline in demand is further aggravated by recession.

As time goes on, some small firms disappear and then some larger firms. This is the reorganization period, also known as survival of the fittest. Then, all of a sudden, production steps up as primary processors increase production and also decide to increase inventory. The price pops up and profits increase. I call that period the painless knife, which I'll explain later.

The current downturn in lumber demand doesn't look too bad compared to the cycles of the '60s and '70s and '80s, although it's a bit deeper than the early 1990s. In the earlier cycles, the little mills – 2 million board feet and under, or a million board feet and under in the earlier days – used to take the brunt of the downturn. They dropped out and nobody even knew it. This time the grade mills, the larger mills, have taken the brunt of the cycle. Another thing that makes this cycle different is that it's dragging on.

An interesting aspect of the hardwood cycle is that the market for hardwood lumber seems to change after every cycle. Before the cycle you may have a small international trade market, and afterwards you may have a big market. Or the flooring market will boom all of a sudden, back to the way it was 40 years ago. And so what will the next market look like? Will it be a desert, as the pessimists are saying, or will it be the Garden of Eden that everybody is hoping for? Chances are it is going to be neither, but there has been one major change.

A lot of furniture plants have shut down in the last two years. At least 10,000 workers have been displaced. The trend was felt first among North Carolina and Virginia producers, but there has been a secondary or tertiary effect as lumber producers have sought out new markets – maybe in other producers' back-yards. This has had a chilling effect on the entire industry.

Demand has declined – My feeling is domestic demand for hardwood lumber has declined a half-billion feet as a result of globalization of the furniture industry. Not only have furniture plants been shut down, but their inventories have been eliminated – thus extending this cycle as

the market absorbs the surplus inventory. Some of the decline in domestic production will be made up by exporting. Still, there is really no way to figure out how much wood is actually processed in China or where that wood is coming from. We also import furniture from Canada and Europe.

Stumpage prices high – While stumpage prices have dropped slightly in some regions, they have remained stubbornly high in most areas, making profitability in sawmilling difficult. This is the damage done by the "painless knife." During periods of declining production, only the efficient mills survive. Then, when the demand starts to rise, there is a feeding frenzy as everybody goes out and bids up the price of timber. What people don't realize is that they are also bidding down the percentage margin of the stumpage prices and lumber prices. In other words, at the beginning of the market cycle the industry does damage to itself that it only begins because producers actually do themselves harm in a period when, in absolute dollars, they think things go up at the beginning of the cycle, the more the margin shrinks. So this time if the lumber prices only rise gradually, you may be more profitable in the long run.

Veneer logs – There's another primary processor out there called the veneer industry. This industry has been expanding, but the supply of veneer quality logs has at best remained constant. So veneer makers have been reaching down and grabbing logs out of that pile that used to go to sawmills.

Companies in Pennsylvania know what I mean. What used to pass for a grade #1 cherry saw log is now a veneer log. A log that you pay \$1,200 for, a veneer producer can pay \$3,000 for. They can do it because they can cut that log up in little thin pieces and get 60 times more square feet out of that pile that used to go to sawmills.

Companies in Pennsylvania know what I mean. What used to pass for a grade #1 cherry saw log is now a veneer log. A log that you pay \$1,200 for, a veneer producer can pay \$3,000 for. They can do it because they can cut that log up in little thin pieces and get 60 times more square feet out of that log than a sawmill does. It is going to be difficult to compete with them, and I really don't see any answer to this. A lot of people, especially the Europeans, are buying veneer, and that really puts a crimp on high-end lumber production (reprinted from the HMA Link, December 2002 issue, with permission of Bill Luppold, U.S. Forest Service).

Source: *The Timber Producer*, March 2002.

ONLINE AUCTIONS – FOR BETTER OF FOR WORSE?

By Dr. Edward C. Brindley, Jr., Ph.D.
Publisher

Online Auctions – for better or for worse? Three years ago, online auctions were a hot topic for the pallet industry. As a new purchasing toy, corporate buyers rushed to join the e-revolution only to find it created a whole new set of problems. Many companies were burned by suppliers that never delivered on their promises. The price may have been right but what about the quality?

Likewise, suppliers complained that the online auctions created a false marketplace. Companies bid prices without having any capability of delivering on the bid due to poor prequalifying procedures. Many saw these auctions as online carpetbaggers preying on the market.

The media buzz surrounding online auctions has died down as reality has set in for corporate America. It appears the fad aspect of online auctions has come and gone. Some companies have identified online auctions as a valuable part of their purchasing strategies. Others have abandoned the process for good old personal contact. Now that the waves have settled; it is appropriate to measure the impact of the online auction storm.

Have online auctions been a boom for your business? Probably not. Have they cost you either business or profits? It is likely that they have. Have they done nothing but squeeze suppliers into accepting lower margins and delivering a more inferior product than the customer had been receiving? The unfortunate answer to both of these questions maybe “yes.”

If you have had experiences with online pallet auctions, both bad and good, you can easily share them with the industry. Dr. Bob Emiliani of the Center for Lean Business Management (CLBM) at Rensselaer Polytechnic Institute recently contacted me about his research on industrial online auctions. Like many of my pallet friends, Bob has found that the promised results have often failed to materialize. But as a legitimate researcher, Bob will let his data do the talking. The CLBM has conducted a study of auctions in the aerospace industry and is reaching out to expand its knowledge base to other industries.

Currently, the CLBM is conducting a survey of the pallet industry to gauge industry reaction to online pallet auctions. What I think is not what counts. What auctions have really meant to our industry does count. As an independent research organization, the CLBM has the ear of major corporations. What it reports likely will impact the way your customers view online auctions. Your input will make a valuable impact.

Good information requires good data input. Now is your chance to help Bob present a realistic picture of how online auctions impact business. Bob and his team have received many surveys in response to appeals in the *Pallet Profile Weekly*, our market report. But more useable surveys are needed to provide meaningful data on the topic. Thus, I am opening the opportunity to the entire pallet industry. All survey data will be kept confidential. General survey results will be made available to all participants, and an industry summary analysis will appear in our magazine.

Visit the Center’s web site at www.theclbm.com/pallet_survey.html to complete a survey or obtain more information. You will also find some information related to the auction related research that has been done in the aerospace industry.

It is my pleasure to be able to partner with our new friends at Rensselaer Polytechnic Institute. Because of my own teaching background, it has always been my desire to use our contacts within the industry to participate in research that might benefit our readers.

It is common for people to complain about things that have a negative impact on them while refusing to do anything about it. Now is your chance to act. Now is your chance for your voice to be heard.

Source: *Pallet Enterprises*, April 2003.

FOREST PRODUCTS INDUSTRY PLEDGES 12% REDUCTION IN GREENHOUSE GASES

By W. Henson Moore

Washington – The American Forest & Paper Association (AF&A), representing the U.S. forest, paper and wood products industry, today pledged to reduce its greenhouse gas intensity as part of the President’s voluntary plan to address climate change.

The association “applauds the President’s initiative to address climate change through enhanced research in technology and science, incentives and voluntary efforts,” said AF&PA President and CEO

W. Henson Moore in a letter to the Administration committing his group to the plan. The plan recognizes that “only a strong economy will allow us to make the investments we need” to reduce our emissions, Moore wrote.

AF&PA members have under way a number of programs to try to meet the President’s climate objectives, and have collectively pledged to pursue them. Among them are inventorying and reporting on greenhouse gases, enhancing sequestration in managed forests and products, improving technologies and energy efficiency, using co-generation, and increasing use of renewable energy and recycling.

“Based on preliminary calculations, we expect that these programs will reduce our greenhouse gas intensity by 12 percent by 2012 relative to 2000,” Moore said in the letter. He also promised to refine AF&PA’s estimates in a year, and in two years to evaluate members’ progress and determine if additional reductions or changes to their greenhouse gas programs are appropriate.

The industry has already taken significant steps to reduce its greenhouse emissions, Moore said. It will continue to derive more than half of its energy needs from renewable energy, or biofuels, Moore told the Administration. The industry leads all other manufacturing sectors in onsite electricity generation, meeting more than half of its own energy needs through highly-efficient co-generation processes, he said.

The letter described several industry programs that AF&PA will use to achieve its goals. A critical program is sequestration – storage – of carbon in forestlands and manufactured products. More than 114 million acres of forests are enrolled in AF&PA’s Sustainable Forestry Initiative (SFI) program, the world’s largest sustainable forestry program. Under the SFI program, forests are managed under rigorous standards for protecting soil and water resources, contributing to biological diversity, conserving unique features and aesthetic values, and enhancing forest productivity. Additionally, the industry produces products that store carbon for decades or longer.

Research and development is also part of AF&PA’s solution. One technology under development would allow for increased burning of renewable biofuels with lower emissions and greater efficiency. Another project, in partnership with the Department of Energy, is biomass gasification. This technique potentially could make the U.S.

forest products industry totally energy self-sufficient and a generator of net surplus power, according to Moore.

Another program is recycling, which avoids greenhouse gas emissions from products prematurely disposed of in landfills. The industry has achieved 48 percent recovery rates for all paper products, and has a current goal of 50 percent.

Moore cautioned that his industry's success will depend partially on the Administration's efforts to "manage the activities of all government agencies, especially the promulgation of regulatory requirements" that may cause increases in greenhouse gas emissions.

"We strongly encourage the Administration to address regulatory requirements where the negative climate impacts outweigh any environmental benefit," he said.

AF&PA is the national trade association of the forest, paper and wood products industry. AF&PA represents more than 200 companies and related associations that engage in or represent the manufacture of pulp, paper, paperboard and wood products. The forest products industry accounts for approximately 7 percent of total U.S. manufacturing output, employs 1.5-million people, and ranks among the top 10 manufacturing employers in 42 states. Visit AF&PA online at www.afandpa.org. (AF&PA) News)

Source: *The Timber Producer*, March 2003

WOODWORKING: IT'S TIME FOR A HIGH-TECH INDUSTRY TO BE PROUD

By Tom Dossenbach

There is a wide-spread perception that woodworking is an outdated industry. To many, it is destined to be relegated to overseas manufacturing companies where there are millions of people without jobs waiting with carving tools to make whatever the market demands.

For reasons that have been formed over the years, the term "woodworking" evokes a vision of dirty, dark and noisy shops where only those who cannot find a better job work. It is as though the industry has been necessary yet embarrassing to our country's manufacturing base.

Of course, you don't find this attitude about the automobile industry or the steel industry. The manufacturing of tires, appliances, shoes, processed food and thousands of other not-so-glamorous industries do not share the same dark corner as woodworking.

We here in North America think this has been our problem and ours alone. Unfortunately, this is not the case because it is actually a challenge around the planet.

I hear the same story over and over again on all six industrialized continents. The story is this: Those in the woodworking industry are just waiting for a better job "in computers." Whatever that means! It is as though there is some fantastic job inside those boxes just waiting to grab you and pull you into some glamorous high paying, high-tech job.

I am tired of hearing that woodworking is not high-tech and I am going to prove otherwise. So feel free to show this column to any skeptics you may meet.

Wood – A High-Tech Material – I can imagine as I write this that some people are thinking that I have lost my mind. Wood is a high-tech material?

I am no wood technology expert. But my studies many years ago and my 42 years of experience with the material since then have brought me to a higher level of respect for the major raw material we call wood. We take a completely renewable living plant and turn it into a beautiful table that will last a lifetime (or longer).

Have you ever paused to review this process in any detail? I don't mean just marveling at CNC routers; I mean the entire process from start to finish. If you are like me, you have taken the technical aspects of our industry and our material for granted for too long.

First, to get the material the tree has to be harvested and taken from miles deep in the forest. The logs then are transported to a high-tech factory where these behemoths are handled with equipment and conveyors like they are not more than mere twigs.

Then, a highly trained and highly skilled operator sits in a digital operations center and manipulates the saw via a computer to make lumber out of what was just a tree only hours or days earlier. The sawmills of today have lasers, metal detectors, defect sensors, in-line moisture detectors and other high-tech equipment used to produce a high quality raw material we call lumber.

Because of all of the automated, value-added steps that come into play, I consider wood to be a high-tech material.

Now advanced science enters the manufacturing process in full force. This tree that was over 60% water must now be dried to a level that makes it a material suitable for "woodworking" to turn it into a useful product. To dry the wood without it cracking, checking, warping, twisting and all of those other dreadful things that wood does is truly a high-tech challenge.

Fiber saturation point, tangential shrinkage, cell structure, and a host of other technical terms have meaning and purpose in the ensuing process for each individual species.

The dry kilns of today fall into several categories. Some are essentially vacuum chambers and some are conventional temperature humidity dryers. Whatever the case, we have found another highly sophisticated process using high-tech machinery to continue the manufacturing of value-added wood products. Today's dry kiln is a complex computerized piece of equipment requiring a well-trained operator. What – another computer?

This computer controls not only numerous kilns, but also a display screen, which rivals that of a global positioning display in an automobile and lets you know what is going on in real time. The graphics show you the exact temperature and humidity at different places in the kiln as well as the moisture content of the lumber in six or so points within the kiln.

This sophisticated drying equipment is needed to stabilize this high-tech material – WOOD! Are you beginning to get the picture?

Cutting Wood – A High-Tech Process – Now that we have dry lumber, we have to convert these boards into something that the average consumer wants and needs. It may be a piece of furniture with hundreds of different parts. To us, it is obvious that we must cut the lumber into usable widths and lengths. I admit that in the old days, Joe used a saw and his keen judgement to make decisions on how to cut the material. We still need extremely skilled and trained operators, but what kind of machine are they using in today's factory?

Once again, computers! (I am already beginning to wonder why there aren't people knocking on our door to work in this high-tech industry). Again, we have machines with sensors, computers and people working together to convert that material we all love into usable pieces. Following the initial cutting, we take our high-tech material to a variety of high-tech machinery that shapes it and bores it and carves it and does other wonders to the wood.

While some operations are still done "the old way," some machining is done on computerized machinery that can read bar codes and automatically machine a completed part or set of parts. Other machines perform fewer operations but are computer controlled none the less.

Many of our machines are actually robotic. Yes, we use robots in our industry. They may not look like C3PO or

R2D2 from Star Wars, but they are robots nevertheless. They automatically place parts within a machine and remove them after processing into neat stacks.

Have you gotten the point yet?

Gluing Wood – A Science – Machining wood is child's play compared to the process of gluing wood to make a higher value-added product. Consider, for example, edge gluing previously cut material into a wider panel for use in the manufacture of curved chair back posts. Obviously, these individual wood elements must be joined with sufficient strength or serious harm can come to the users of the furniture if there is joint failure.

Gluing wood together is a high-tech science in itself. The equilibrium moisture content of each hardwood element must be held to a close tolerance of about 6 to 8 percent. If it is too low, there may be a "starved" glue joint; if too high, the wood cells will not be able to absorb the adhesive. In either case, failure is likely.

For those woodworking companies that edge-glue material, especially thicker parts, the challenges do not end after the successful completion of the gluing process. End cracks may occur in the joint or the ends of the wood after a few hours or days.

To investigate the causes of the problem involves the consideration of several variables: the moisture content of the wood, the quality of the glue joint, the glue itself, the glue application, the pressing operation, the humidity in the factory – just to name a few. Moisture meters and a magnifying glass are just two tools that are often needed to find all of the contributing factors of the failure. The answers are found through experience and the use of the knowledge of wood technology, which in itself is a high-tech subject.

I'll bet you are finally getting it.

Summary – There is just not enough space allowed in this column to fully explore all of the "high-tech" elements of our industry such as finishing. Maybe I am preaching to the choir and all of the regular readers of this magazine realize most of what I have mentioned above. But, sadly, many do not.

The unfortunate fact is that the technological evolution of our industry has not been communicated sufficiently to dispel the perception mentioned at the beginning of this article. That is our fault. Consumers, workers, and children in primary school, need to learn about this.

Our future in the woodworking industry relies on our ability to attract keen minds to further our technological advancement in this industry. We need to realize this is

a high-tech industry and that it is up to us to leverage that to attract god young people into the industry to help revitalize it.

Let's get on with it!

Personal Note: As I began writing this, I thought of the many years Jerry Metz contributed to the advancement of our industry and thus dedicate these thoughts to his memory.

Tom Dossenbach is managing director of Aktrin-Dossenbach Associates LLC, a Sanford, NC-based international management and productivity consulting and research firm. He can be reached at (919) 775-5017 or through his firm's Web site at www.dossenbach.com. His articles are archived on www.iswonline.com.

PUBLICATIONS

HPVA'S 2003 WHERE TO BUY MEMBERSHIP GUIDE - The 37th edition of the *Where to Buy Hardwood Plywood, Veneer, and Engineered Hardwood Flooring Buyers' Guide and Membership Directory* is now available from the Hardwood Plywood & Veneer Association. One of the hardwood plywood and veneer industry's most professional marketing publications, this 204-page directory is the best single source of information for these products available today.

The *Where to Buy* is organized to allow you to find products quickly and easily. The directory includes: made/cut-to-size and stock panel manufacturers; finishers of hardwood plywood; wholesale distributors; and suppliers to these industries. It provides sizes, glue types, species, and specialty items manufactured. The sections on sliced, spliced, and rotary veneer manufacturers and sales agents include species, thickness, and length of veneers available and type of veneer (spliced, rotary, half round, plain sliced, rift/quarter sliced, or length sliced). Each company's sales contact is listed with the complete address, telephone, e-mail, web site, and fax numbers (if available).

This comprehensive guide also includes a description of HPVA's member and laboratory testing services, and a summary of Association benefits. In addition, order sheets for hardwood plywood and veneer can be copied and used by purchasers to ensure the order has been communicated completely.

"The *Where to Buy* is an invaluable resource for anyone looking to find hardwood plywood and veneer products and services," commented Bill Altman, president of HPVA.

The Hardwood Plywood and Veneer Association is an international trade association that supports the long-term growth and prosperity of the industry, its members, and raw materials upon which the industry depends. Founded in 1921, HPVA represents over 90% of hardwood stock panel, 95% of sliced veneer, and 85% of rotary veneer production in North America.

Copies of the award-winning *Where to Buy* can be ordered free of charge (\$5.00 shipping and handling) from HPVA's secure publications page at www.hpva.org or through the mail. Overseas and special delivery shipping rates extra. Please call for quote. HPVA, PO Box 2789, Reston, VA 20195-0789.

COMING EVENTS

JULY 16-17 – 2003 – Hardwood Plywood & Veneer Association to Conduct Plywood Sales Seminar in Charlotte, NC. Hardwood Plywood & Veneer Association is pleased to open registration for a Hardwood Plywood Grading and Sales Workshop in Charlotte, NC. This two-day seminar provides attendees with in-depth knowledge of the manufacturing process for plywood and veneer, the change to grade 80 hardwood faces, tips for selling plywood, and a tour of Genwove U.S. Ltd., a veneer slicing mill in Indian Trail, NC. Confirmed speakers include John Ackerman, Genwove U.S. Ltd.; Mike Clausen, The Penrod Co.; Reggie Hubbard, Darlington Veneer; and Gail Overgard, Timber Products Co. For more information and registration forms, visit HPVA's website www.hpva.org or call (703) 435-2900.

JULY 28-30, 2003 – Beginning Dry Kiln Operators: Basic Class at the Hampton Inn, South, Wyoming, MI. Purpose - Basic class on drying hardwood lumber focuses on common methods for drying hardwood lumber of different species and thickness, with minimal drying defects for high quality applications. Special attention is given to reducing drying defects in oak and drying white woods without sticker shadow or other discolorations.

The Wood Doctor – Gene Wengert is President of The Wood Doctor's Rx, LLC, 2872 Charleston Drive, Madison, WI 53711-6502 and Professor Emeritus at the University of Wisconsin-Madison.

As a former professor and extension specialist at Virginia Tech, and researcher at the US Forest Products Lab, Gene teaches over 30 practical wood processing classes and seminars a year for the wood

products industry, including sawing, edging, grading, drying, machining and gluing.

Gene is the author of eight practical books and has published over 400 articles relating to the wood products industry.

Instructor – Eugene Wenger, Emeritus Professor, Univ. of Wisconsin-Madison, President, The Wood Doctor's Rx, LLC, 2872 Charleston Drive, Madison, WI 53711-6503, phone (608) 271-4441, email: WoodDoc@UWAlumni.com, website: www.WoodWeb.com.

AUGUST 11-14, 2003 – The 26th Annual Kiln Drying Short Course will be held at the University of Minnesota, St. Paul Campus. The University of Minnesota's Department of Wood and Paper Science and the University of Minnesota Extension Service sponsor the course in cooperation with the Department of Forest Ecology and Management at the University of Wisconsin-Madison.

The course is designed to provide basic training for dry kiln operators and supervisors, but anyone desiring to learn more about kiln construction, kiln operation and wood-moisture relations is welcome and encouraged to attend. No previous drying experience or training is necessary.

Instructions will include lectures, demonstrations and "hands on" kiln drying experience. Conventional kiln drying of hardwood lumber will be emphasized, however, the use of dehumidification and solar kilns, air-drying, and procedures for drying softwood will also be covered. Ample time will be available for group interaction as well as individual consultation.

For further information contact: Harlan Petersen, Department of Wood and Paper Science, University of Minnesota, 2004 Folwell Ave., St. Paul, MN 55108, phone (612) 624-3407, Fax (612) 625-6286, Email: harlan@umn.edu, Website: www.cnr.umn.edu/WPS/exten/kdsc.

AUGUST 19 2003 – HPVA's Fall Conference – The Hardwood Plywood & Veneer Association is pleased to announce that their fall conference will be held at The Fairmont Scottsdale princess in Scottsdale, AZ.

Elizabeth Ward, Executive Director of Wood Products International AF&PA, is coming directly from the WTO – Trade Ministerial meeting in Cancun to Scottsdale to report on the world trade negotiations for wood products.

Dr. Jerry Teplitz will discuss *Your Success Formula: Personal or Business* –

aimed at giving participants an immediate and accurate picture of their own behavior style at work or at home. They will learn how to work with and relate to others more effectively and successfully. The seminar has immediate take-home value.

Special programs are also planned for the Veneer General Session, the Natural Resources Committee, the Hardwood Plywood Educational Session, and the Distributors Industry Forum. Those speakers will be announced when they are confirmed.

The deadline for rooms at the Fairmont is August 19, 2003. For more information visit our web site, www.hpva.org, or call (703) 435-2900.

THE SUSTAINABLE FOREST Management Summit of the Great Lakes Forest Alliance offers leading edge short courses as a Pre-Summit Event! All THREE short courses are described here now: Register at <http://www.lsfafa.org>.

Short Course 1: ISO 14001 Environmental Management System: Overview of the EMS Elements as Applied to Forest management Organizations – this overview course is based on the ISO 14001: 1996 standard and is designed to assist forest industry environmental managers in the development and implementation of an ISO 14001 Environmental Management System (EMS). This course will introduce and discuss the 17 elements of the ISO 14001 EMS Standard with a specific emphasis on its application within a forest management context. Participants will learn the fundamental concepts of the ISO 14001 EMS standard. All 17 elements of the ISO 14001 EMS standard will be covered so participants learn the benefits of a comprehensive management system. Participants will also learn how to address their company's specific activities, products, and services through a common sense approach for analyzing environmental aspects and impacts (a core requirement of the ISO 14001 EMS standard). Finally, the instructor will present EMS implementation planning strategies for successfully managing on EMS implementation project, registration fundamentals, a registrar's interpretation of the ISO 14001 EMS standard, and auditor expectations. This short course will be presented by Steve Ruddell, Director, Forest Industry Services of BVQi North America.

Short Course 2: New Tools and Techniques in Forestry in Canada and the US: Tools for Precision Forest Inventories & Multi-Scale Operational Modeling –

This course will be presented in two parts. The first part of the course introduces an innovative method of developing very accurate and cost-effective tree-based forest inventories for management planning at the landscape, unit, block, stand, and tree levels. This part of the course will be presented by Rob Cormier of R & B Cormier Inc. The second part will examine a new software tool that integrates a set of multi-scaled set planning tools to allow more robust preparation and analysis. This part of the course will be presented by David Bladwin of Spatialworks.

Short Course 3: World Timber Supply/Demand Analysis: Findings with Focus on The Great lakes Forest – At the turn of the millennium two highly respected organizations completed and published their analysis of the world timber supply and demand balance. The Food and Agriculture Organization of the United Nations (FAO) to prepare "Forest Product Market Developments: The Outlook for the Forest Management Markets to 2010 and the Implications for Improving Management of the Global Forest Estate." This report was published in 1999 in support of the World Bank's Forest Policy Implementation Review Strategy. Adrian Whiteman, Forestry Officer (Sector Studies) is one of the three authors of the report and will present the findings of the FAO analysis. Resource Information Systems, Inc (RISI) published its 25 year outlook in 2001 as the "World Wood Fibre Study – Analysis and Forecast". RISI is a private company based in Bedford, MA specializing in the economic analysis of the international forest industry. Keith Balter, Vice President, is one of the authors of the report and will present the findings of the RISI analysis. This course will focus on the basic context and findings of the models. Timber supply projections reflect trends in intensively managed forests and plantations, and competition for use of the natural forest. Demand for industrial roundwood is derived from projected end-use product demand recognizing competing sources of fiber supply. Findings are presented by region and by product, including projected trends in real product prices. The global and North American outlooks will be presented with a special effort to relate findings to the Great Lakes Forest Alliance jurisdictions.

Contact Wendy Hinrichs Sanders, Greta Lakes Forest Alliance, PO Box 722, Hayward, WI 54843, phone (715) 634-2006 (phone & fax), e-mail:

forestls@lsfa.org, website:
<http://www.lsfa.org>.

FOR SALE

Timber and Forest Products

PRODUCTION WOOD TURNINGS – Bed posts. Table pedestals, table legs, etc., for the furniture industry. Balusters and Newel posts for interior stair railings. Red Oak, Maple, Poplar, Knotty Pine. Contact John Petricola, Email: JOHNPWOODMARK@HOTMAIL.COM

DOWELS, RODS, POLES, ¾" to 2 ½" dia., lengths up to 16 ft. long with no splicing. Can splice poles longer. Ideal for tool handle replacements. We also make factory cart truck stakes, and replacement parts. Wheelbarrow handles, core plugs, rewinding plugs, plywood shipping circles, pry bars, lifting sticks, paddles, many types of wood plugs, cutting sticks plus many types of custom made wood products, made to customer's specs. For a quote contact Mark Slade at Mark Slade Manufacturing, 110 South Mill St., Seymour, WI 54165-1250 or call (920) 833-6557 or Email to DRHANDLES@NEW.RR.COM.

CEDAR LUMBER AND CANTS, paneling, fencing. 4x8"x8 6x6"x8 or in the dimensions you need; excellent cedar and great price. Contact Billy Imhof, 5859 Cingmars Road, Littlefork, MN 56653, phone (218) 278-4417.

PLYWOOD, OSB, particleboard, and/or MDF cut-to-size or shape according to your specifications. From high-end uses like furniture and architectural to lower grades suitable for boxes or pallet decks. Plywood blocks for pallets are also available.

Contact Joe Campbell, Steel City Lumber Company, PO Box 36189, Birmingham, AL 35236, phone (800) 733-1907, Fax (205) 733-1709, Email: Joecampbel@aol.com.

Equipment

MARATHON EDGER 2 blades/movable 15 hp 3 phase used/year \$7500 new - asking \$4500. Excellent condition (715) 239-6310 evenings. Contact Jim Bohaty, 916 E. Townline Road, South, Cornell, WI 54732.

USED PARTS FOR SKIDDERS, small crawlers, and excavators – shipped daily-

parts for CAT, JD, INC. AC, MH, Athey, Bantam/Kohering, Bobcat, Case, Clark, Timberjack, Drott, Franklin, Hein-Warner, Insley, Leiberr, Michigan, Mitsubishi, New Holland, New Process, Pettibone, Taylor, Tree Farmer, and Trojan. We also have engines, transmissions, and tires. If we do not have it, we can try to find it with one of our parts locator systems that contact over 300 parts dealers nationwide. We are also interested in buying salvageable machines. Contact Schaefer Enterprises of Wolf Lake, Inc., PO Box 136, 4535 State Route 3 North, Wolf Lake, IL 62998. Ask for Dick, Kevin, Rodney, or Gina if buying, or ask for Jerry if you are selling call (800) 626-6046 or (618) 833-5498, Fax (618) 833-7765, or Email us at parts@sewlparts.com or visit our web site at www.sewlparts.com.

10X10 ARMERICAN MOULDER, new bobbit, flat belt v-belt on main drive. T & G and log siding knives, four heads. Very good condition. Under Power; 2) Frick 36" manual mill all steel, very tight right hand 3-head blocks, tapers, 4th headblock for space; 3) 671 Detroit power unit left hand. Contact John Eisbach, 610 S. Devils Todder Road, Galena, IL 61036, phone (816) 777-1223 evenings, (816) 777-3426 days.

MORBARK MODEL 640 DEBARKER; Morbark PortaPac sawmill; Fastline log merchandizer; Bronco pallet stacker; Lauderdale Hamilton super chop pup-up trimmer; Newman chamfering machine; Cornell double arbor resaw with cut-up system; Cornell remot trim saw; Cornell 42" blower w/30 hp drive; Cornell cant sizer; Pendu diesel powered M5000 gangsaw w/log cabin tooling; Pendu double arbor resaw with cut-up system; Brewer gang saws; Wilson 4-strand unscrambler w/Corley package deck; Arasmith whole pallet grinder; Woodpower grinder Mod T-60; Morbark waste recycler; Williams C-32 NO-Nife hog; Hempstead low-speed whole pallet grinder; Waechter 4-head band resaw; Stake pointers. Contact Bob (610) 678-5703, Fax (610) 678-5955, email: ramco@juno.com.

WOODS 133BM PUSHEED moulder, 5-head, 12" wide includes numerous heads (about 75), jointer bars, blow pipes, electrical panels, 40" blower w/30 hp motor, large cyclone w/air lock, 200 KW CAT genset, package deal only \$18,500. Contact Lee Sherfield, N2541 Crane Dr, Medford, WI 54451, phone (715) 748-9947.

JACKSON SAWMILL – 1988 40HD Model 152 E complete/infeed deck, turner, carriage track, and off bear/ all motors, hydraulics and electric, \$30,000. Contact White City Lumber Co., Inc., E15948 St., Hwy 82, Hillsboro, WI 54634, phone (608) 489-2861.

LAUDERDALE HAMILTON Super Chop Pop-up trimmer; Newman & Hazelthorn chamfering machines; Cornell double arbor resaw with cut-up system; Cornell 500-B with cant sizer; Cornell remote trim saw; Cornell 42" blower w/30 hp drive; Cornell linebar resaw; Cornell cant sizer; Pendu diesel powered M5000 gangsaw w/log cabin tooling; Pendu double arbor resaw with cut-up system; Brewer gang saws; Wilson 4-strand unscrambler w/Corley package deck; Arasmith whole pallet grinder; Woodpower grinder Mod T-670; Morbark waste recycler; Williams C-32 NO-Nife hog; Hempstead low-speed whole pallet grinder; Waechter 4-head band resaw; Stake pointers. Contact Bob (610) 678-5703, Fax (610) 678-5955, email: ramco@juno.com.

THREE BELL 4A DOWEL machines with extra blades & setups up to 2 ½" diameter. Plus large table saw, 30 blades, most are carbide tipped, 12" to 16" diameter. Contact Mark Slade at Mark Slade Manufacturing, 110 South Mill St., Seymour, WI 54165-1250 or call (920) 833-6557 or Email to DRHANDLES@NEW.RR.COM pictures available by email.

5/4 X 6" deck boards 8' untreated. F.O.B. New Lisbon, WI. 224 pcs/unit, contact New Lisbon Wood Products, 1127 S. Adams, New Lisbon, WI 53950, phone (608) 562-3122, Fax (608) 562-3221, Email: acewoodproducts@excite.com.

8 INDUSTRIAL UP-SAWS with infeed rollers and outfeed stops for sale. Contact Tree Star, Ron Kunkel, 1809 Center Rd., Hazel green, WI 53811, phone (608) 744-3248.

1220 TIMBERKING sawmill, 15 hp, will cut 18' log. Also, Wright bandsaw sharpener. Contact John Marquardt, W15610 Fair-Morr Rd., Tigerton, WI 54486, phone (715) 535-2910.

40" CLEERMAN L.H. carriage, 3 HB, Silvetech computer, Brownsville turners, proportional hyd. Setworks, knees rebuilt, also options less than 2 years old. Also,

track & rail and Tyrone 220 feedworks, hyd. Pump and hyd motor less than a year old. 5'4" Fulghum chipper w/screen, blower and cyclone. Contact Butch Kersten, 295 Hwy 45, PO Box 245, Birnamwood, WI 54499, phone (715) 449-2518.

HYDRAULIC SAWMILL carriages – Mudata networks, tower dogs, cant turn-downs, many unique features. Contact: Jackson Lumber Harvester Co., Inc., 830 N State Rd 37, Mondovi, WI 54755, phone (715) 926-3816, Fax: (715) 926-4545, Email: info@jacksonlbrharvester.com, Web: www.jacksonlbrharvester.com.

LINK-BELT FELLING machine track type 1600 CII, 3700 hours 1993, 18,000 lbs, Dangle type head new in 2002, very fuel-efficient diesel. Low ground pressure, good for hardwood thinning. Contact Dan Haugen, 11472 Fairfield Rd, Minnetonka, MN 55305, phone (612) 868-9934.

3 SAW CANT TRIMMER; Mattison 202 straightline rip saw; Baxter-Whitney 32" double surfacer; Newman 500 4-sided planer; Vollmer saw grinders; Tool grinders; New self-container rolling type pallet runner notcher; 6 log decks; 3 circular gang saws; 3 vertical band resaws; Baker horizontal hand resaw; Murphey diesel power unit 160 hp; 2 gothic fence machines; 60" laminated roller; New dood-fired vertical steam boiler 10 hp; Mill saws for sale 1 60", 13 56", 3 52", 1 48", 2 42" 2 40". Many other smaller I.P. saws for scraggs and edgers; 100 h.p. closed center hydraulic unit; New hand-held grinder for sharpened, chipper knives in the machine; Good older log truck and trailer with Prentice 120. Contact Kent Erding, Wykoff, MN, phone (507) 352-4098 evenings, (507) 352-6546 days, Email sawfast@hmtel.com.

BARK PROCESSING PLANT – Conveyor & hopper infeed; First big roller screen; Patz chain conveyor under screen; Patz inclined chain conveyor; Second roller screen with conveyor transfer; 40' Patz inclined chain conveyor; Nugget conveyor. All required electric motors, starters, switches, wiring, etc. ALSO, CORNELL- blowers, edgers, trimmers, notchers, slabsaws, log cleaners, unscrambler, decks; VALBY- wood chippers; FARMI- skidding winches (in stock); HITACHI- power tools & chains; PATZ- conveyors & belts; LACEY HARMER- laser lights; DANCO- rip saws; WEBSTER- vibrating conveyors; JONSERED- Chainsaws; DIXON-

sawmills, edgers, conveyors, log turners, hydra-dogs, pallet notchers, debarkers, slab edgers, trimsaws, decks, rollcases, small hydraulic loaders & trailers, trailers with loaders for 4 wheelers; SAFE-T-SHELTERS- storm shelters; over 100 used electric motors & electrical equipment; used sawmill machinery. Contact Rusch Equipment Sales, 400 Rusch Rd, Antigo, WI 54409, phone (715) 627-4361, Fax (715) 627-4375.

SLIGHTLY USED FAS Trac model #307 left hand band sawblade sharpener - \$4,500. Shipping charges additional – for immediate shipment. Sharpens 2-1/2" to 7" wide bands – for blades 20 ft. length and under. ALSO, used inserted tooth saw blades. Contact Harry R. Schell, Sawmill Sales 7 Supplies, Inc., 601 W. Park St., Blue River, WI 53518, phone (800) 462-5807.

LARGE 4-SIDED WOODS planer, old but works. 4"x12" capacity. Set up can see it run with appointment. Includes all duct work with blower, but not 60 hp power unit \$4,000, ALSO 420 collector wide front I.D. farm tractor - \$4,000 or B.O. Contact Lumber Jack, 9810 S. Thompson Rd., Foxboro, WI 54836, phone (715) 399-2783.

Services

TRUCKING WANTED – Have near new truck and pup and am looking for a good logger or mill to haul for. Dependable and experienced. Call Jon Bohaty, 916 E. Townline Rd, South, Cornell, WI 54732, phone (715) 239-6310.

FUNGUS PROBLEM? Disease? Decay? Stain? Mold? Analysis and testing using AWWA, NWDA, ASTM standards and other methods based on your needs or situation; new products testing; fungus isolation and identification from trees, wood products and wood in use. Answers to your questions. Contact Dr. Dana Richter, Forest Resources and Environmental Science, Michigan Technological University, Houghton, MI 49931, phone (906) 487-2149; dlrichte@mtu.edu; <http://forest.mtu.edu>.

G. & G. RECONDITIONS – Montgomery hog teeth, anvils and rings, Zeno grinding machine cutters. Contact G. & G. Repair, East Sparta, OH, phone (330) 866-9764, Fax (330) 866-5225, Email: hgg9407@aol.com, visit our website: <http://www.GGRepair.com>.

CIRCULAR, BAND & CARBIDE saw blade repair. Also, authorized dealer for: Simonds, Pacific/Moe, IKS, Piper, Euro, Corley, Helle, Hanchett, Cornell, Meadows/Miner Edger, Frickco, Oleson, etc. Contact Harry R. Schell, Sawmill Sales & Supplies, Inc., 601 W. Park St., Blue River, WI 53518, phone (608) 537-2987, customer order line: (800) 462-5807, Fax (608) 537-2032.

DIXON-RUSCH CO., LLC is the manufacturer of the Dixon-line of sawmill & logging equipment & we manufacture three different sizes of circular sawmills, two sizes of edgers. Our mills & edgers are made both stationary & portable & we also manufacture: log turners, belt & chain conveyors, rollcases, log turners, hydra-dogs, pallet notchers, slab edgers, debarkers, multiple saw trimmers, custom built, but we are seeking sealers in other areas. Contact Dixon-Rusch Co., LLC, 400 Rusch Rd., Antigo, WI 54409, phone (715) 627-4361.

WANTED TO BUY

Forest Products

6/4 LOW GRADE HARDWOOD lumber. Contact Bob (610) 678-5703, Fax (610) 678-5955, email: ramco@juno.com.

SHEET MOSS, PINE CONES and Princess Pine. Seasonably we buy: Birch branches and Balsam Boughs. Contact Winter woods, (800) 541-4511, Email: www.winterwoods.com.

HARDWOOD CROSS TIES & switch ties – Orders to place for 2003 shipments. 7"x9" – 8' or 8'6" or 9'. Load rail or we can truck, quick pay. Mixed hardwood timbers, all sizes. Pallet cants – 3"x6" & 4"x6"; Switch ties wanted – Orders to place for Oak & mixed hardwood switch ties. 7"x9" - 13' & 14' – rail, 7"x9" – 15' & 16' – truck, 7"x9" - 17' & 18' – rail, Also need 22' & 24'; Veneer logs, also C3S logs. Must be able to load 40' containers. Need Walnut, Cherry, Red Oak, White Oak, Ash, Hard Maple and Poplar logs. Timbers for logs homes – advise what you now make. Call me to arrange inspection; Ultra-Shorts wanted – Need 4/4 RO & WO, KD clear 4' & 5'. Also shorts 1 foot & longer, KD, rough, in most species. Also 4/4 #2 common, Ro or WO in 4' & 5' or what have you. Persimmon wanted – Need 10/4 FAS or 1 common x 6"x3" and longer. Contact W. Preston Germain, Germain lumber Co.,

Inc., Pittsburgh, PA 15215, phone (412) 782-3240, Fax (412) 781-2551.

Services

MILLS WHICH CAN produce oak car decking, can surface, perhaps drill, sound tight knotted grade. 3"x6" – 10' or mix hardwoods if you can fabricate construction or industrial parts. Contact W. Preston Germain, Germain Lumber Co., Inc., Pittsburgh, PA 15215, phone (412) 782-3240, Fax (412) 781-2551, Email: germain@bellatlantic.net.

Employment

WEEKES FOREST PRODUCTS is seeking a top performer with 3+ years Industrial lbr. Sales exp. For our St. Paul, MN and Milwaukee, WI offices. This opening offers a top comp plan & fringes. Light travel only. Contact Ken Boehmer in complete confidence (651) 644-9807, Fax resume (651) 644-9520; or Email: kenb@weekesforest.com, visit our website: www.weekesforest.com for more information about Weekes.

CROSS TIE BUYERS – may be retired person, call on mills near you. Quick pay mills. Take by truck or rail depending on areas. Good incentive arrangement. Also, man who can inspect logs before shipment. Contact W. Preston Germain, Germain Lumber Co., Inc., Pittsburgh, PA 15215, phone (412) 782-3240, Fax (412) 781-2551, Email: germain@bellatlantic.net.

If you want to list items, fill in the form below:

FOR SALE

WANTED TO BUY

SERVICES

EMPLOYMENT

FOREST PRODUCTS ☐ FOREST PRODUCTS ☐ FOR SALE ☐ AVAILABLE ☐ REMOVE FROM
EQUIPMENT ☐ EQUIPMENT ☐ WANTED ☐ WANTED ☐ MAILING LIST ☐

NAME ----- DATE -----
ADDRESS-----COUNTY -----
CITY ----- ZIP CODE -----PHONE AC (----) -----

The Wisconsin Department of Natural Resources reserves the right to edit all items included and accepts no responsibility for the accuracy of description or for the commercial integrity of the persons or firms making offers in this Bulletin.

If you wish to use the facilities of the Bulletin, forward a letter, post card or form on page 11 with detailed description of your "wanted" or "for sale" items. All forest products (stumpage, logs, pulpwood, posts, poles, trees and lumber, etc.) and services (custom sawing, custom kiln drying and

tree planting, etc.) may be listed. Please be sure your full name, address (including zip code), telephone number accompany your listing, there is no cost for listing any items. If you want items repeated in the next issue, send in a written request. If you have comments about the Bulletin or have suggestions on its content, write to: Forest Products Specialist, 3911 Fish Hatchery Road, Fitchburg, WI 53711, phone (608) 231-9333 FAX (608) 275-3338.

DEADLINE FOR ITEMS TO BE LISTED IS THE 20TH OF: FEBRUARY, APRIL, JUNE, AUGUST, OCTOBER, and DECEMBER.



Printed on recycled paper



Department of Natural Resources
Forest Products Specialist
3911 Fish Hatchery Road
Madison, WI 53711

ADDRESS CORRECTION REQUESTED

